of that species; and Bonaparte and Coues ask: "*Quid Procellaria munda*, Kuhl?" If it should prove really new, it may go by the name PUFFINUS ELEGANS, nob.

Royal Zoological Museum, Turin,
September 12th, 1868.

VI.—*Further Notes on South-African Ornithology.*

By E. L. LAYARD, F.Z.S., &c.

IN continuation of my Notes, as promised in my letter of the 17th of December 1867 (Ibis, 1868, pp. 242–248), I beg leave to offer the following. The numbers prefixed to the names of the species refer to my 'Birds of South Africa.'

5. OTOGYPS AURICULARIS. Mr. Henry Jackson has sent me eggs of this fine Vulture from the interior of the country, which differ considerably from those which are found in the neighbourhood of the sea-coast. They are white, with small distinct spots of the colour of dried blood, whereas those from the southern parts of the colony, that I have seen, are as described in my book. Mr. Jackson found that the eggs of this, and the next, weighed 9 oz. each. It breeds in June, as also does the next species.

6. GYPS FULVUS. Mr. Jackson has obtained for the Museum a splendid series of the eggs of this bird, and I append an account which he has sent me of an assault on the Vultures' "Krantz" in the Beaufort Mountains.

"The South-African Museum being in want of eggs of *Gyps fulvus* from this country, I determined to try and procure some from a noted breeding-place of this species a short distance from my residence. My first attempt was made on the 19th October, 1866; but this proved too late in the season, all the eggs being hatched—though I had the satisfaction of ascertaining that most of the nests were accessible with the aid of a rope. I made a second attempt on the 31st August, 1867, but was again too late, obtaining only two addled eggs. Determined to be in time this year, I sent my nephew on the 30th May to see what the birds were doing; and he reported seven eggs visible from the top of the "krantz" or precipice. Giving the birds three weeks longer to finish laying, I sent him again on the

20th June, accompanied by an active man, and provided with two stout ropes (together 180 feet in length), provisions for the day, blowpipe and drill, and knapsacks filled with wool for the eggs. The following is his account of the trip:—

"'We started at 8 o'clock A.M., and, after about an hour's walk, reached a fountain. From this point a tedious climb of about an hour and a half brought us to the summit of the mountain, and we stood on the edge of the krantz. We proceeded along the edge, looking carefully down below for eggs, until, in about a quarter of an hour's time we sighted one, and forthwith prepared for a descent. The krantz, seen from a distance, has the appearance of a long perpendicular precipice, with few inequalities on its face; but in reality it leans back considerably from the perpendicular, and its ledges and jutting points afford sufficient footing to enable one to descend almost anywhere with the aid of a rope suspended from the top. The greatest height of the krantz is about 550 feet, and the average about 400 feet. The Vultures build on the ledges about one-third of the distance from the top; and their nests, composed of sticks, bushes, and grass, in the form of a shallow plate, and about two feet in diameter, contain one egg each. The cliffs about the nests are quite white from the droppings of the birds, and this is conspicuous from a great distance. The krantz runs about east and west, and faces south, so that for some months in winter the sun does not reach it.

"'Having fixed one end of the longest rope to a large stone, provided myself with a knapsack, and taken off my shoes to enable me to secure firmer footing, I began to descend. The rope proved too short, and we had to join another to it. I there got four eggs. They are of a dull bluish-white, some being slightly speckled with brown at the obtuse end, and weigh 9 oz. After blowing and packing these, we hauled up the rope and proceeded further, descending wherever we saw eggs that could be got at, until we had obtained sixteen. It was now 4 o'clock P.M., we had traversed about half the length of the main krantz, and were beginning to think of returning, when, on rounding a corner, we were agreeably surprised by the sight of a number of birds on the ledges below. We frightened them off,

and counted seventeen eggs! Taking two knapsacks, and descending very nearly to the full length of both ropes, I found myself on a vast shelf, along which I could almost run. On this I got nine eggs, besides several more on smaller ledges, which I could easily gain without the rope. I filled one knapsack, and was sadly put to it to get it up safely. I managed, however, by fastening it to the rope and drawing it up by easy stages, until I got it, together with other eggs gathered on the way up, safely to the top. It was now too late to blow them; so I packed them as they were, and we started on our return home, which we reached at 7 o'clock P.M.'

"Thirty-four were obtained on this occasion; but three of the unblown ones got broken on the way back, and of the remainder I forwarded twenty-eight to the South-African Museum."

11. Aquila senegalla. Breeds in June. Eggs have been received from Mr. Jackson, Mr. Ortlepp, and my son; they are of a rounded-oval shape, white, and more or less spotted and blotched with dark red spots. Axis 2·75 in.; diam. 2·084.

Mr. Ortlepp writes:—"A few weeks ago, a pair darted down on a flock of merino ewes and lambs, and only flew off after having despatched forty of the latter! At the time this happened, the sheep were in charge of a small bush-boy, in a secluded kloof, far away from the homestead. They quite disregarded the boy, and were only put to flight when the unfortunate owner made his appearance with a gun." This is a most unusual occurrence: a single lamb is often killed by them, and devoured; but what occasioned this lust for slaughter exceeds my comprehension.

13. Aquila verreauxi. Messrs. Jackson and Ortlepp have both sent eggs of this fine Eagle; the latter writes:—"These birds lay about the beginning of July*, on ledges of steep precipices, though not always, as I have heard of their nests in taijbos-bushes [*Rhus lucida*, Linn.] along the Zeekoe River. Eggs two. For some time after leaving the shell, the young birds are quite white, more like balls of swans' down than birds." The Museum now has five fine eggs of this bird.

* June in some places.—E. L. L.

14. Spizaetus coronatus. Mr. W. Atmore writes to me that this species "prefers thickets of mimosa-trees, and is very destructive to geese and young lambs. It makes a large nest in a mimosa, and lays two large white eggs, much pointed at the small end."

16. Spizaetus occipitalis. Dr. Atherstone, of Graham's Town, writes of one which he had tame for some time, that "he used to walk up and down the river's bed, catching frogs, and afterwards was so mean as to kill our pet toads and lizards on our grass-plat." For the enormity last mentioned, he was transported; and I saw him on his way to England in the mail steamer, mewed up in a hen-coop. It served him right; for he was too grand-looking a bird to descend to such ignoble game.

21. Haliaetus vocifer. This Fish-Hawk does not always confine himself to the prey mentioned by me (B. S. Afr. p. 17). Lately, while on a shooting-excursion on the sea-coast near L'Agulhas, I found a fine male example, in young plumage, hung on a tree with a bullet-hole through his chest. His crime was, that night and morning for several days he had regularly carried off one of my friend Mr. Van der Byl's lambs! Mr. Atmore also writes me word that they will kill lambs. Mr. Ortlepp sent a splendid egg of this bird, taken from a nest on a tree on an island in the Orange River. It is pure white, with a very fine grain, and is much pointed at the small end.

44. Accipiter gabar. Le Vaillant's account of the eggs and nest is correct. The eggs are, axis 1·67 in., diam. 1·291. The nest is sometimes lined with wool.

46. Melierax musicus. Mr. Jackson says that this species never lays more than three eggs, and more often only two. The bird is very abundant in his neighbourhood.

58. Bubo capensis. Mr. Atmore writes that it is "common in the Karroo, but rare at George. I once took a nest at Buffelsjaghts River in a mimosa-tree, that had been used by a Crow the previous year. It contained three white eggs."

64. Otus capensis. I met with several of these Owls at Naghtwaght, the residence of Mr. Alexander Van der Byl,

near L'Agulhas; they inhabited a dry vley, their colour resembling exactly that of the dead grass and rushes.

74. Cypselus gutturalis. I saw the first specimen of this Swift on the 28th of August, this year; at the same time also, I saw *Hirundo capensis*, and two days later *H. rustica*. My son, at Swellendam, two hundred miles off, gives about the same dates, and adds *H. dimidiata*. He also says that "*Atticora holomelas* arrived on the 5th September, *Hirundo rufifrons* (the old pair that breed here) on the 6th, and *H. capensis* on the 8th."

94. Cotyle palustris remained in sheltered places all the past winter, which was a mild one.

109. Ceryle maxima*. Mr. Atmore writes:—"I once found one of these birds with his bill shattered, evidently against a stone while striking his prey in too shallow water."

117. Merops hirundinaceus. Mr. Ortlepp thinks this species does not migrate like its congener *M. apiaster*. He has found it in midwinter (June) hawking over the Orange River.

196. Saxicola albiscapulata, and 197. S. rufiventer. I have come to the conclusion that these are but male and female of the same species, and the origin of Le Vaillant's figures (Ois. d'Afr. iv. pl. 188) of "Le Traquet à queue striée" and "Le Traquet à cul roux," of which he has wrongly numbered the letter-press. He probably saw, but did not obtain, specimens; but afterwards becoming acquainted with the Indian species, and recognizing the general likeness, described that bird.

199. Saxicola sperata. Mr. Atmore writes that "at Oliphants River a pair made a nest on a hair-broom in a bed-room, and brought off their young,"—a fact rather confirmatory of the supposition that this is Le Vaillant's "Traquet familier."

209. Parus cinereus. Of this Mr. Atmore writes, "common at Swellendam in the mimosa-thickets: breeds in hollow trees. I have seen twelve eggs in a nest which must certainly have required all the fur off a hare to make it!"

* [An rectius *C. guttata* (Bodd.)?—Ed.]

210. Parus cinerascens. Sent from Colesberg by Mr. Ortlepp. Le Vaillant's figures (Ois. d'Afr. iii. pl. 138) are much too highly coloured.

219. Motacilla capensis. The yellow Wagtail mentioned under my notice of this species (B. S. Afr. p. 119) has again turned up near Cape Town. A fine example was shot by Mr. Duminy near D'Urban, twelve miles off. On comparing it with examples of *M. flava* from Europe, in the Museum, it seems to be identical, the yellow eye-brow, however, being hardly so perceptible.

220. Motacilla longicauda. Mr. Glanville, the curator of the Albany Museum at Graham's Town, informs me that a specimen of this bird has been lately procured near that place.

231. Anthus lineiventris [Sundev. Œfv. K. Vet. Ak. Förh. 1850, p. 100]. Mr. Ortlepp has procured several of these Pipits at Colesberg. A remarkable feature has been omitted from my description, owing to the imperfect state of the solitary specimen that had then reached my hands. The inside edge of the flexure of the wing and the under wing-coverts are bright yellow.

234. Chætops frenatus. Mr. Atmore says that this bird is common on all the mountains that he has ascended, and that it builds in crevices. The eggs are like those of *Bessornis phœnicurus*. I lately saw a single specimen cross the road through Houwhoek, a mountain-pass about forty miles from this, and speed up the mountain with its usual enormous bounds.

258. Criniger importunus. According to Mr. Atmore, it builds near the ground, and its eggs are like those of *Telephonus collaris*.

265. Pycnonotus aurigularis. Mr. Atmore, whose vocation as a surveyor has led him to be abroad constantly in Outeniqua (the locality given by Le Vaillant for it), says he never saw anything at all like this bird.

281. Muscicapa grisola. My son has procured this species at Grootevadersbosch, near Swellendam.

319. Laniarius silens. Mr. Ortlepp says, "found about

the Orange River. Its song is sweet and sustained, and it has also considerable powers of imitation." I saw a few pairs about Grootevadersbosch, but I never heard them utter any sound.

324. Laniarius icterus. Another specimen of this grand Bush-Shrike is in the Museum at Graham's Town, obtained, I believe, in that neighbourhood.

339. Juida phœnicoptera. Mr. Henry Bowker says they breed in hollow trees or deserted Wood-peckers' nests. Mr. Atmore says they "do not come to the westward of the head-waters of the Gamtoos River."

353. Dilophus carunculatus. My brief account of the breeding-habits of this bird is confirmed by two other intelligent eye-witnesses. The species never seems to return two successive years to the same neighbourhood.

363. Hyphantornis ocularius. A single female was obtained near Graham's Town, by Mr. Fred. Barber, who saw it "poking about amongst old dead leaves, scratching and searching for insects."

366. Sycobius bicolor. Said by Mr. Atherstone to be common along the coast to the eastward of the Kei River. The back of the head is furnished with a few elongated bristle-like feathers, in some instances bifurcating, resembling those of the Indian genus *Trichophorus*.

379. Chera progne. Mr. Henry Bowker, a close observer of our fauna and flora, tells a story different from that given by my other informant. He writes "This bird seldom interferes with our corn-lands, and is mostly found on open flats. It builds its nest in long grass close to the ground. The points of the blades are drawn over and tied together at the top, like the framework of a native hut. The tail of the male in the breeding-season is not an inconvenience to him. He never seems to enjoy himself so much as during a high wind, in which he shows himself off to advantage, spreading his tail out like a fan. I should say the average is ten or fifteen females to one male." This latter statement is curious, and

accords with what I have seen of the allied *Vidua principalis*, (No. 375). One male in full breeding-dress is usually attended by from five to ten females. Can they be polygamists? does the male never sit on the eggs? and does the same thing prevail in *Estrelda astrild*, which is said to breed in communities, several hens laying in one nest, and eggs being hatched at different times?

441. Crithagra selbii. I found this species abundant about Saldana Bay and the Berg River, during a recent trip thither. Mr. Ortlepp also sends it from Colesberg. It is called "Dik-bec Scisje" and "Berg-Scisje," by the colonists.

443. Crithagra strigilata. I cannot help thinking this may prove to be the female of (No. 442) *C. butyracea*.

532. Coturnix histrionica. Several specimens of this bird have been procured not far from Graham's Town, and to the eastward, one of which has been forwarded to me by Mr. Glanville. I at once recognized it as the Quail purchased by the Count de Castelnau, as mentioned in my book (p. 275).

535. Pterocles tachypetes. Mr. Atmore declares it only lays two eggs. Another correspondent says three.

542. Eupodotis ludwigi. Mr. Jackson affirms it only lays one egg. The bird is common in his neighbourhood. These contradictions open a curious question for inquiry. It cannot be that errors as to the number of eggs of birds so well known are wilfully made. I can only fancy that the number is determined by the ease or difficulty with which food is obtained in the different localities to which the birds resort to breed. In places where food is plentiful, it is easy to bring up a larger family, and *vice versâ*. In connexion with this subject, I was informed lately that the Locust-bird, *Glareola nordmanni* (No. 555), always lays its eggs where it knows a large supply of young locusts may be expected, and at such a time that the young may be excluded when the insects are afoot. In some instances, owing to a mistake in their calculations, the locusts have taken flight before the brood was able to follow, and they have

been consequently deserted by the parent birds and left to perish.

550. Œdicnemus maculosus. I plead guilty to correcting a gentleman who was better informed than myself (B. S. Afr., p. 288, note). *Œ. senegalensis* (qu. *Œ. crepitans*?) has just turned up on the vast flat plateau called the Strand Veldt, the south coast of the continent, about L'Agulhas. It must, however, be extremely rare, as Mr. H. Van Breda, who forwarded the specimen, has lived there for very many years, and never saw it before.

552. Cursorius bicinctus. Mr. Atmore writes that it "lays only one egg [!!], on the bare ground, without even scratching a hole. It prefers bare, grey places by the roadsides. I picked up nearly twenty on my road home from the Nieuw Veldt, in September and October, by watching them run away from a small flock of sheep."

565. Charadrius tricollaris. Mr. Chapman, the author of 'Travels in the Interior of South Africa,' informs me that this is the bird mentioned in his volumes as living with the hippopotamus and warning him of danger.

610. Totanus stagnatilis. Procured at Colesberg by Mr. Ortlepp, and at George by Mr. Atmore, who says it is not uncommon there.

617. Recurvirostra avocetta. The mystery of these birds frequenting our parched inland wastes is explained; Mr. Ortlepp has found them breeding on the vleys near Colesberg, and sends their eggs. Mr. G. C. Faure forwards it from a new locality, Hope Town.

621. Tringa subarquata. On the 26th of April last, a lad brought a live example in full breeding-dress, captured near the town.

652. Mareca capensis. Professor Schlegel (Mus. P.-B. *Anseres*, p. 18) gives this as a synonym of *Anas strepera*, Linn. Surely this is a mistake? And yet he quotes "J. Verreaux" as the source whence the specimen (number 10) was acquired in

1858. Both the species are in the South-African Museum; and I do not see how they can be confounded. I do not think that *A. strepera* is found here.

680. Stercorarius catarrhactes. I lately sent the Zoological Society two living examples of the southern Great Skua, and I am anxiously waiting to know if it turns out the same as the northern bird, or whether, like *Cypselus gutturalis* and *C. barbatus*, our birds are sufficiently distinct to constitute a new "species."

694. Podica mosambicana. A specimen, probably a female, of this rare bird has been sent for my inspection by the Curator of the Albany Museum. It was found dead one frosty morning on a deep pool of the Kareiga River, in the Eastern Province. Mr. E. Atherstone says they are still to be found on the Kleinmond River, further to the eastward. I at once recognized it as the bird at which I have twice shot.

696. Plotus capensis. At the Berg River I visited a "rookery" of these birds. It consisted of about thirty nests —thick dense masses of sticks, and weeds resting on them, placed among the branches of some African willows, which in the breeding-season are surrounded by water, but are dry at other times. The eggs are much prized as very delicate food.

730. Graculus africanus has been shot by Mr. F. Barber near Graham's Town.

Ere I close, let me thank Mr. Gurney for his valuable "Notes" on my 'Birds of South Africa.' His corrections and suggestions have been thankfully received, and recorded for a second edition, should such be called for. If I ever attempt it, I trust I shall have an opportunity of personally testing the correctness of my synonymy and identification, by visiting the continental museums, wherein are stowed the collections of other workers in South Africa, and of consulting the zoological works in the rich libraries of Europe. Few people are aware of the disadvantages under which I laboured in this far-off land, in want of books of reference, without collections to refer to, with no friend at hand to consult. I never, to quote my own preface, "put forth this Catalogue as complete; . . . . it is a move

forwards, and may serve as a foundation for the labours of others." May those who follow, having the "foundation," build a more perfect structure! I console myself with the remembrance that the giants of our science, with all the advantages which a residence in the midst of books, collections, and societies can give, make mistakes. If the mighty fall, what shall the pigmies do?

And now a few words in explanation of the species occurring beyond my limits of latitude. In 1855, when I began my catalogue, my intention was to stop at the Tropic of Capricorn. This range would have included all these. In 1865 my lamented friend Andersson broached his intention of publishing his discoveries, and in 1866 he finally settled on his scheme. He then asked me to restrict my 'Catalogue' to the Twenty-eighth parallel. To this I agreed, and lent him all my manuscript notes. We weeded out all species occurring beyond the prescribed limit, with the exception of those given by Sir Andrew Smith in his 'Report,' which we considered should be retained. I should have alluded to this in my preface; but it escaped my memory. The reasons were:—1st. Most of the species were known by us to have a wide range, and were likely to be found, sooner or later, in my limits; many of them had, indeed, already been so found, but the exact localities were uncertain. The late Mr. R. Moffat, whose headquarters were at Kuruman, but who had collected about Griqua Town and along the Orange River, had sent me many of them, and spoken of others as being found south of the Twenty-eighth parallel, for example *Aedon paena, Turdus obscurus, Plocepasser mahali, Estrelda squamifrons, Pyrrhulauda leucotis* (all since found near Colesberg), *Bessornis humeralis, Crateropus jardinii, Eurycephalus anguitimens* (procured by Burchell south of 28°), *Pterocles variegatus* and *P. gutturalis* (these last with vast powers of flight and very migratory), and *Prionops talacoma. Textor erythrorhynchus* and *Ploceus taha,* I had pretty good authority for believing, had certainly been found in my limits. *Ploceus lathami* and *Estrelda erythronota* should have been omitted, with *Malaconotus australis, Merula litsitsirupa, Alauda chuana, Cinnyris talatala,* and *Chrysoptilus bennetti*; I believed these were mostly merged

in some other names subsequently adopted by Sir Andrew, instead of those originally given, and left them in for identification. *Eupodotis ruficrista* I had from many places within my limits, though beyond the Orange River. *Passer motitensis*, only found by Sir Andrew sixty miles north of the River, is certainly, taking his route, well within the limits. *Hyphantornis tahatali*, he says, occurs "between the Orange River and the tropic," and *Schizærhis concolor* "inland from Port Natal."

Looking at all these facts, we decided upon keeping them in my catalogue; I must plead guilty to the omission of the explanation which ought to have been given.

But my aim, with all my shortcomings, has been accomplished. An impetus *has* been given to South-African ornithology; the many letters I have received from friends and strangers assure me of this; and already many ornithologists in England and elsewhere, who barely knew that any birds existed in South Africa (!), are looking us up and, I doubt not, will do good service. I trust that an occasional page will be granted me in 'The Ibis;' and I will duly chronicle all the novelties that come to hand, and the corrections that should be made; and I will not spare my own bantling.

VII.—*The* Malurinæ *of North-eastern Africa.*

By Dr. M. T. von Heuglin*.

(Plates I.–III.)

The North-east African *Malurinæ*, among which I include the genera *Aedon*, *Bradypterus*, *Catriscus*, *Oligocercus*, and *Camaroptera*, are for the most part inhabitants of the tropical regions of the continent. In Egypt and Northern Nubia, southward to the limit of rain, there are only *Drymœca cisticola*, *D. gracilis*, *Aedon galactodes*, and *Bradypterus cettii*, and in Arabia Petræa the somewhat aberrant *Drymœca inquieta*. Southward from lat. 18° N., *Oligocercus* and *Camaroptera* make their appearance, as also tolerably numerous species of typical forms (*Drymœca*), and in the western district of the country about the sources of the Nile the genus *Catriscus*.

* Translated by W. S. Dallas, F.L.S. &c.